MAC 2311 Hybrid Calculus I (B)

**Sections 5.1-5.3**

1. Estimate R3 (Right Riemann Sum), L3 (Left Riemann Sum), and M3 (Midpoint Riemann Sum) under the graph of from *x* = 0 and *x* = 3 using 3 rectangles. Draw the graphs with the rectangles clearly indicating each area.

Answers: R3\_\_\_\_\_\_L3 \_\_\_\_\_\_\_\_ M3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Evaluate by interpreting in terms of areas. ANS: π/4

3. Evaluate

4. Evaluate

5. Evaluate

6. Find

7. True/ False. Since is an odd function, . Explain.

ANS: False Integral diverges because 1/*x* is discontinuous at *x*=0.

8. True/False If, then . Explain.

ANS: False Net area is not necessarily the same as total area.

9. Give a function where

ANS: